

Hanford Advisory Board River and Plateau Committee

Plutonium Finishing Plant (PFP) Closure Project



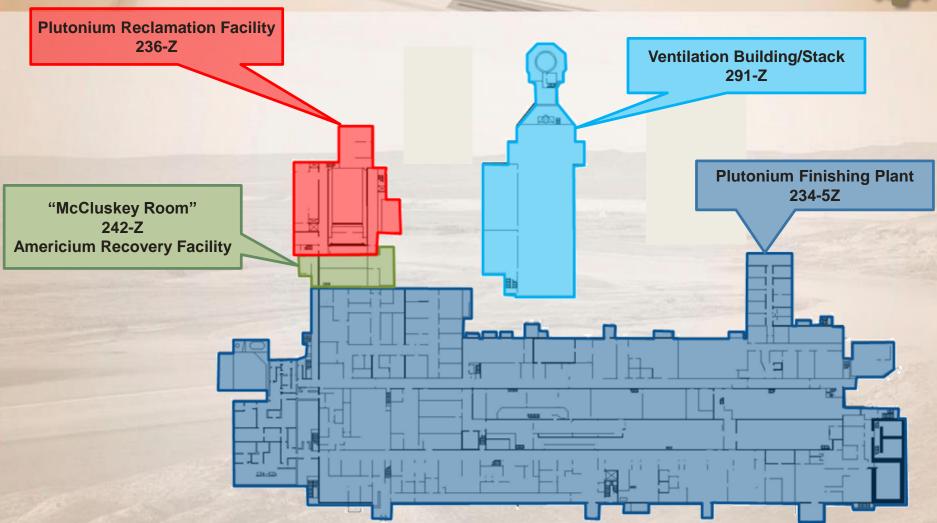
Overview and Project Status



April 2016

PFP: The Lay of the Land





291-Z 242-Z 236-Z

PFP: Path toward Demolition



Plutonium Reclamation Facility 236-Z

- All pencil tanks removed
- Work underway:
 - Canyon decontamination
 - Gallery glove box preparation
 - Process and chemical line removal









PFP: Plutonium Reclamation Facility Canyon















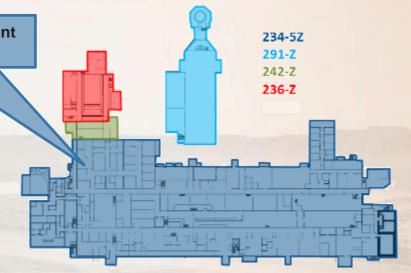


PFP: Path toward Demolition



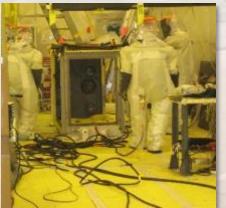
Plutonium Finishing Plant 234-5Z

- All glove boxes/hoods taken off ventilation
- In-situ glove box size reduction complete
- Work underway:
 - Ventilation duct removal









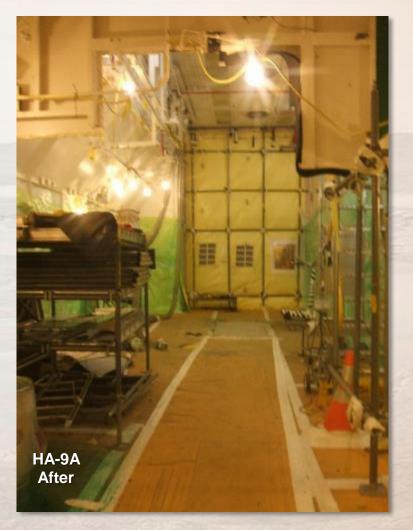




PFP: In-Situ Glove Box Size Reduction









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Inside 234-5







PFP: Ventilation Duct Progress: 2014





8,882 total feet of E4 ventilation duct to remove/prepare for removal

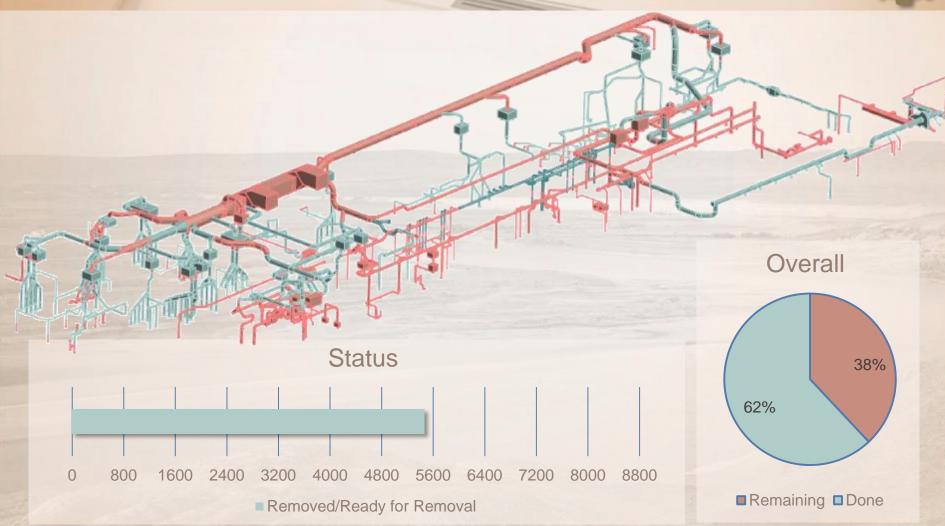


Employees modifying the ventilation system to support duct removal



PFP: Ventilation Duct Progress: 2016





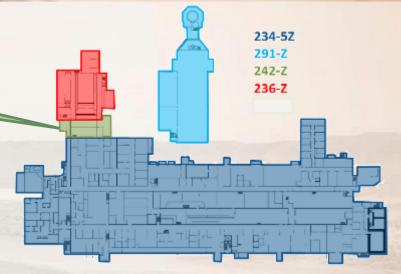


PFP: Path toward Demolition



"McCluskey Room"
242-Z
Americium Recovery Facility

- Three remaining glove boxes removed
- Work underway:
 - Preparing to remove chemical tanks during demolition











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Inside 242-Z







PFP Progress, Removing Hazards



	Original	Remaining	
Processing Equipment (e.g., glove boxes) Removed or Ready for Removal during Demolition	238	4 (98 Percent Complete)	
Pencil Tank Sections Sealed Out	196	0 (100 Percent Complete)	
Feet of Ventilation Ducts Removed or Ready for Removal during Demolition	8,882	3,349 (62 Percent Complete)	
Buildings Demolished	81	15 (81 Percent Complete)	





PFP: Highest-Hazard Work at DOE





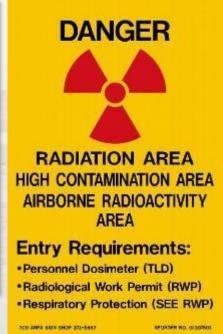
Release Limits <20 DPM/100 cm² Removable Contamination



MORE TO BUILDINGS IN



20 DPM/100 cm² .2 DAC



2,000 DPM/100 cm² .2 DAC



25 million DPM/cm² 206,000 DAC

Increased contamination levels and safety equipment required



PFP: Improving Safety Performance







CHPRC improved the process of doffing/removing Level B PremAire suits after several skin and clothing contaminations, including the use of additional fixative outside of the suit and additional protective clothing under the suit.



Red circles on the exhaust hose (left) and vortex cooler (right) indicate where contamination was discovered. Following discovery, CHPRC strengthened release processes.

Other Actions:

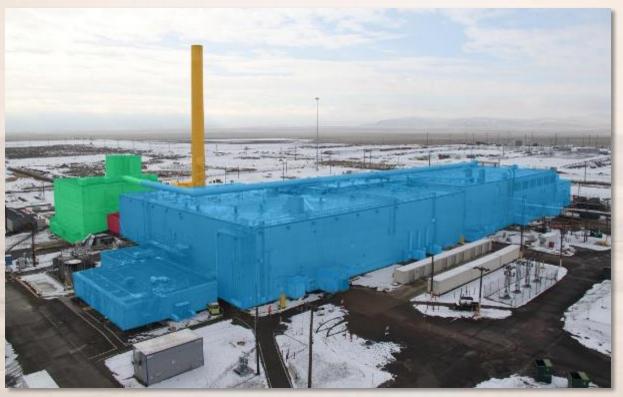
- PFP Leadership Change
- External and Internal Audits of Procedures

- Additional Management and Safety Oversight
- Resequencing of Work to Focus on Safe Performance



PFP Timeline and Sequence





I	Demolition Sequence and Duration					
ı	236-Z Plutonium Reclamation Facility	10 weeks	3	234-5Z Plutonium Finishing Plant	17 weeks	
	2 242-Z Americium Recovery Facility	2 weeks	4	291-Z Ventilation Stack and Fan House	9 weeks	



PFP: The Future









- Final remediation of remaining sites including buried piping will be conducted as part of 200-WA-1, 200-IS-1, and 200-PW-1/3/6/200-CW-5 operable units
- Characterization to support demolition will provide valuable information about the contamination that will remain after demolition, for future cleanup
- Slab on grade:
 - Above-grade structures removed; slabs and foundations left in place
 - Accessible below-grade transuranic waste removed
 - Piping exiting slabs belowground plugged or grouted
 - Below-grade void spaces filled/covered for contamination control and to prevent subsidence
- Contamination control cap applied where needed to facilitate surveillance and maintenance

